

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY (Chapter I of the Patent Cooperation Treaty)

(PCT Rule 44bis)

|  |  |  |                  |
|--|--|--|------------------|
| Applicant's or agent's file reference<br>P00038846-P0  | <b>FOR FURTHER ACTION</b>  |  | See item 4 below |
| International application No.<br>PCT/JP2005/007062   | International filing date (day/month/year)<br>12 April 2005 (12.04.2005) | Priority date (day/month/year)<br>14 April 2004 (14.04.2004) |                  |
| International Patent Classification (8th edition unless older edition indicated)<br>See relevant information in Form PCT/ISA/237 |  |  |                  |
| Applicant<br>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.  |  |  |                  |

1. This international preliminary report on patentability (Chapter I) is issued by the International Bureau on behalf of the International Searching Authority under Rule 44 bis.1(a).

2. This REPORT consists of a total of 4 sheets, including this cover sheet.

In the attached sheets, any reference to the written opinion of the International Searching Authority should be read as a reference to the international preliminary report on patentability (Chapter I) instead.

3. This report contains indications relating to the following items:

|                                     |              |   |
|-------------------------------------|--------------|---|
| <input checked="" type="checkbox"/> | Box No. I    | Basis of the report   |
| <input type="checkbox"/>            | Box No. II   | Priority  |
| <input type="checkbox"/>            | Box No. III  | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |
| <input type="checkbox"/>            | Box No. IV   | Lack of unity of invention  |
| <input checked="" type="checkbox"/> | Box No. V    | Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |
| <input type="checkbox"/>            | Box No. VI   | Certain documents cited   |
| <input type="checkbox"/>            | Box No. VII  | Certain defects in the international application  |
| <input type="checkbox"/>            | Box No. VIII | Certain observations on the international application   |

4. The International Bureau will communicate this report to designated Offices in accordance with Rules 44bis.3(c) and 93bis.1 but not, except where the applicant makes an express request under Article 23(2), before the expiration of 30 months from the priority date (Rule 44bis .2).

|   |                       |   |
|---|-----------------------|---|
|   |                       | Date of issuance of this report<br>19 October 2006 (19.10.2006) |
| The International Bureau of WIPO<br>34, chemin des Colombettes<br>1211 Geneva 20, Switzerland |                       | Authorized officer<br><br>Masashi Honda                         |
| Facsimile No. +41 22 338 82 70  | e-mail: pt08@wipo.int |   |

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL SEARCHING AUTHORITY

To:

**TRANSLATION**

**PCT**

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

|   |   |   |  |
|---|---|---|--|
| Applicant's or agent's file reference<br><b>P00038846-P0</b>                      |   | Date of mailing<br>(day/month/year)                 |  |
| International application No.<br><b>PCT/JP2005/007062</b>                         | International filing date (day/month/year)<br><b>12.04.2005</b> | Priority date (day/month/year)<br><b>14.04.2004</b> |  |
| International Patent Classification (IPC) or both national classification and IPC |   |   |  |
| Applicant<br><b>MATSUSHITA ELECTRIC INDUSTRIAL CO., LTD.</b>                      |   |   |  |

|   |                                     |  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|---|-------------------------------------|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|--|-----------|----------------------|--|--|--|--|--|--|--|--|--|--|--|--|------------|----------|--|--|--|--|--|--|--|--|--|--|--|--|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|------------|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|-----------|--|--|--|--|--|--|--|--|--|--|--|--|--|------------|-------------------------|--|--|--|--|--|--|--|--|--|--|--|--|-------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------|---|--|--|--|--|--|--|--|--|--|--|--|
| <p>1. This opinion contains indications relating to the following items:</p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 15px; text-align: center; padding: 2px;"><input checked="" type="checkbox"/></td> <td style="width: 15px; text-align: center; padding: 2px;"><input type="checkbox"/></td> </tr> <tr> <td></td> <td>Box No. I</td> <td colspan="12">Basis of the opinion</td> </tr> <tr> <td></td> <td>Box No. II</td> <td colspan="12">Priority</td> </tr> <tr> <td></td> <td>Box No. III</td> <td colspan="12">Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</td> </tr> <tr> <td></td> <td>Box No. IV</td> <td colspan="12">Lack of unity of invention</td> </tr> <tr> <td></td> <td>Box No. V</td> <td colspan="12">Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</td> </tr> <tr> <td></td> <td>Box No. VI</td> <td colspan="12">Certain documents cited</td> </tr> <tr> <td></td> <td>Box No. VII</td> <td colspan="12">Certain defects in the international application</td> </tr> <tr> <td></td> <td>Box No. VIII</td> <td colspan="12">Certain observations on the international application</td> </tr> </table> | <input checked="" type="checkbox"/> | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |  | Box No. I | Basis of the opinion |  |  |  |  |  |  |  |  |  |  |  |  | Box No. II | Priority |  |  |  |  |  |  |  |  |  |  |  |  | Box No. III | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability |  |  |  |  |  |  |  |  |  |  |  |  | Box No. IV | Lack of unity of invention |  |  |  |  |  |  |  |  |  |  |  |  | Box No. V | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |  |  |  |  |  |  |  |  |  |  |  |  | Box No. VI | Certain documents cited |  |  |  |  |  |  |  |  |  |  |  |  | Box No. VII | Certain defects in the international application |  |  |  |  |  |  |  |  |  |  |  |  | Box No. VIII | Certain observations on the international application |  |  |  |  |  |  |  |  |  |  |  |
| <input checked="" type="checkbox"/>   | <input type="checkbox"/>            | <input type="checkbox"/>   | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. I                           | Basis of the opinion   |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. II                          | Priority   |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. III                         | Non-establishment of opinion with regard to novelty, inventive step and industrial applicability   |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. IV                          | Lack of unity of invention   |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. V                           | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. VI                          | Certain documents cited  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. VII                         | Certain defects in the international application   |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
|   | Box No. VIII                        | Certain observations on the international application  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
| <p>2. <b>FURTHER ACTION</b></p> <p>If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.</p> <p>If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.</p> <p>For further options, see Form PCT/ISA/220.</p>   |                                     |  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |
| <p>3. For further details, see notes to Form PCT/ISA/220.</p>   |                                     |  |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |                          |  |           |                      |  |  |  |  |  |  |  |  |  |  |  |  |            |          |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                            |  |  |  |  |  |  |  |  |  |  |  |  |           |  |  |  |  |  |  |  |  |  |  |  |  |  |            |                         |  |  |  |  |  |  |  |  |  |  |  |  |             |  |  |  |  |  |  |  |  |  |  |  |  |  |              |   |  |  |  |  |  |  |  |  |  |  |  |

|  |                    |
|--|--------------------|
| Name and mailing address of the ISA/JP | Authorized officer |
| Facsimile No.                          | Telephone No.      |

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/JP2005/007062

Box No. I Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.  
 This opinion has been established on the basis of a translation from the original language into the following language \_\_\_\_\_, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
  - a. type of material  
 a sequence listing  
 table(s) related to the sequence listing
  - b. format of material  
 in written format  
 in computer readable form
  - c. time of filing/furnishing  
 contained in the international application as filed.  
 filed together with the international application in computer readable form.  
 furnished subsequently to this Authority for the purposes of search.
3.  In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE  
INTERNATIONAL SEARCHING AUTHORITY

International application No.  
PCT/JP2005/007062

|  |  |                   |     |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
|--|--|-------------------|-----|-------------|--------|-------------------|-----|--|--------|-------------|----|---------------------|--------|------------|-----|--|--------|----------------|----|-------------------------------|--------|------|-----|--|--------|--|----|
| Box No. V  | Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement |                   |     |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
| <p>1. Statement</p> <table> <tr> <td>Novelty (N)</td> <td>Claims</td> <td>2-8, 12-14, 16-19</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1, 9-11, 15</td> <td>NO</td> </tr> <tr> <td>Inventive step (IS)</td> <td>Claims</td> <td>2-8, 12-14</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td>1, 9-11, 15-19</td> <td>NO</td> </tr> <tr> <td>Industrial applicability (IA)</td> <td>Claims</td> <td>1-19</td> <td>YES</td> </tr> <tr> <td></td> <td>Claims</td> <td></td> <td>NO</td> </tr> </table>   |  |                   |     | Novelty (N) | Claims | 2-8, 12-14, 16-19 | YES |  | Claims | 1, 9-11, 15 | NO | Inventive step (IS) | Claims | 2-8, 12-14 | YES |  | Claims | 1, 9-11, 15-19 | NO | Industrial applicability (IA) | Claims | 1-19 | YES |  | Claims |  | NO |
| Novelty (N)  | Claims   | 2-8, 12-14, 16-19 | YES |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
|  | Claims   | 1, 9-11, 15       | NO  |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
| Inventive step (IS)  | Claims   | 2-8, 12-14        | YES |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
|  | Claims   | 1, 9-11, 15-19    | NO  |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
| Industrial applicability (IA)  | Claims   | 1-19              | YES |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
|  | Claims   |                   | NO  |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |
| <p>2. Citations and explanations:</p> <p>Document 1: JP, 3055130, U (Toyo Radiator Co., Ltd.), 6 January, 1999 (06.01.99), paragraphs [0004]-[0005], Figs. 1-2 (Family: none)</p> <p>Document 2: JP, 2003-302176, A (Denso Corp.), 24 October, 2003 (24.10.03), paragraphs [0064]-[0066], Figs. 24-25</p> <p>The subject matter of claim 1 does not appear to be novel or to involve an inventive step, since it is described in document 1 cited in the ISR.</p> <p>The subject matters of claims 9-11 and 15 do not appear to be novel or to involve an inventive step, since they are described in document 2 cited in the ISR.</p> <p>The subject matters of claims 16-19 do not appear to involve an inventive step in view of document 2. A person skilled in the art could have adequately selected methods for working and splicing the base plates in the device disclosed in document 2.</p> <p>The subject matters of claims 2-8 and 12-14 are neither described in any of the documents cited in the ISR nor obvious to a person skilled in the art.</p> |  |                   |     |             |        |                   |     |  |        |             |    |                     |        |            |     |  |        |                |    |                               |        |      |     |  |        |  |    |